Before the
Federal Communications Commission
Washington, D.C.

In the matter of:

Revitalization of the AM Radio Service	**)**	
	)	**MB Docket No. 13-249**
Second Further Notice of Proposed Rulemaking	**)**	
	)	

COMMENTS OF T Z SAWYER TECHNICAL CONSULTANTS

The engineering technical consulting firm of T Z Sawyer Technical Consultants ("TZS") hereby submits these comments in response to the Commission's Second Further Notice of Proposed Rulemaking that was issued in the above-captioned proceeding on October 5, 2018. In the Notice, the Commission solicited comment on specific proposals that are listed herein.

TZS by its principal Timothy Z. Sawyer has participated in this proceeding since its inception and has provided engineering and related technical services to the telecommunications and broadcast industry regarding AM, FM and Television Broadcast facilities for nearly 50 years. In particular, TZS by its principal has designed or caused to be designed or modified or newly constructed numerous AM directional and non-directional antenna systems in use today. TZS has additionally created numerous FCC engineering applications (and grants therein) for new or modified AM radio facilities to relocate to new sites, and /or diplex or triplex their signal with others at common sites as well as the production of detailed frequency allocation studies and applications for new facilities.

FCC Proposal A. Change Nighttime and Critical Hours Protection to Class A AM Stations.

Daytime hours proposal:

The notice indicates that daytime protection to Class A stations are to be afforded protected to the 0.5 mV/m groundwave contour during daytime hours from both co-channel and first-adjacent channel stations. The proposed required protection to Class A stations is outlined in the table presented in Appendix A, Proposed Rule Changes Section 4 on page 13.

TZS continues to support adoption of the proposal as it pertains to daytime service of Class A stations (and all other stations in turn.) In particular the changes to the first and second adjacent channel protection requirements, as well as the elimination of the third-adjacent channel protection requirement, those items should proceed to an immediate favorable conclusion.

TZS urges the Commission to adopt these standards (protection ratios) for co-channel and first-adjacent, second-adjacent channel stations and the deletion of the third-adjacent channel protection requirement for *all station classes* immediately, while preserving the 0.5 mV/m groundwave contour protection to Class B, C and D until it is resolved in a further notice.

Additional comments regarding other class stations:

While we fully support the adoption of the 0.5 mV/m groundwave daytime contour protection changes for Class A station, TZS believes that the change in the protected groundwave contour for other station classes to the 2.0 mV/m may be excessively high, and as requested in paragraph 16 of the notice, provides the following observations.

Many rural facilities have satisfactory service to the 1.0 mV/m contour. That being said, we also believe that the spectrum noise floor has increased to a level nationwide that no longer supports protection to the 0.5 mV/m groundwave contour for other Classes of stations.

However, on the other hand, increasing the contour protection value for other class stations to 2.0 mV/m will allow them greater flexibility in site selection and possible increases in operating power which has far greater benefit then service to the limits (edge) of the inherent noise floor of the channel.

Class C stations which are limited in power to 1-kilowatt will not have the option of a power increase. The question concerning what relief to provide Class C stations is troublesome and will require greater industry focus than it has currently received.

Many Class C station clients have express interest in a possible channel change to an adjacent regional or clear channel as a Class D facility in which they would be allowed to operate during the daytime hours with much greater power and a larger service area, only to be reminded that as a Class C facility they cannot do so. Only existing Class B facilities may become Class D facilities, thus any doorway or path to increased power for Class C facilities is blocked by their inability to change station class without first becoming a Class B facility (with the expense of constructing a full-service nighttime antenna system). It's time to remove this restriction on Class C stations and allow them to convert to Class D on regional or clear channels if possible.

Critical hours proposal (Alternative 2):

TZS supports Alternative 2, the revision of paragraph (h) of §73.24. We believe that during the critical hours period that protection to the Class A station's 0.5 mV/m groundwave contour from skywave interference is in the greater public interest. The permissible field limits from other facilities to the protected contour of the Class A station can simply be scaled by a factor of 5. In many cases, this increase in radiation limits will reduce the requirements of other stations to reduce daytime power during the afternoons or delay full power daytime during the morning critical hours period.

The public is served in both cases, the protected Class A station continues to receive protection of its daytime contour, and other facilities will have the ability to continue to serve their local communities during this transitional skywave period without undue restrictions (limits on daytime power).

Nighttime protection proposal (Alternative 1):

As previously noted in TZS prior comments, we are now modifying our support to the use of a 0.5 mV/m nighttime groundwave service contour as a means of defining the nighttime service area of a Class A facility for both CONUS and Alaskan stations. We have modified our approach to consider contour protection rather than a 50% RSS site-to-site "multiple station" method as used for Class B facilities. However, rather than using a single station method value calculated along the 0.5 mV/m contour edge we believe the use of the "multiple station" method (50% RSS) offers a more exact value and should be employed at points along the protected

nighttime groundwave contour edge. The real permissible radiation differences are small over that of site-to-site calculations but do allow some further (abet minor) protection to Class A stations over the simple site-to-site multiple station method. [1]

Effects of these proposals on EAS and IPAWS systems:

The comments on the impact on EAS and IPAWS systems from the proposals in this notice are best left to the network experts in hopefully redundant system designs. We would think that such a system would be best based on many nodes rather than the coverage of a Class A AM station that may or may not be staffed 24/7. In a national or regional emergency, there are several well define alternate communications paths to disseminate warnings, alerts, and other "bad" news.[2] Reliance on a point to point relay network built largely on Class A AM facilities can't be good except as a primitive means of relaying messages.[3] We are clearly not onboard (or qualified in the operation therein) to express our opinions on a professional level concerning the proposed Class A changes and their impact on the operation of the EAS and IPAWS systems.

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[1] At this point I'm reminded of a quote often erroneously attributed to Sir Winston Churchill, presented in its abbreviated form: "Madam we've already established what you are, now we are haggling about the price."

[2] "Nothing travels faster than bad news" ~ Mother Sawyer 1950.

[3] ... do you hear the drum beats, or see the smoke signals from yonder mountain peak? Excuse me while I change the ribbon in my teletype machine.

FCC Proposal B: Change Nighttime RSS Calculation Methodology; Change Daytime Protection to Class B, C and D Stations

We agree with the proposed changes to Nighttime RSS calculation (all classes) and the daytime protection to Class B, C, and D Stations to the extent discussed in our comments today and those filed in earlier comments in this docket.

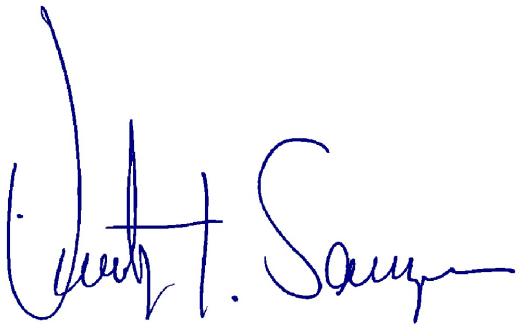
When reviewing the comments of others there appears to be little doubt that the Commission's efforts to mediate interference in the 1990s between stations simply did not evolve into beneficial results. The technological advances of the last 30 years simply added to the man-made noise level in the band and far exceeded any benefit that the 1991 rule changes envisioned in interference reduction among broadcasters by themselves. Simply put, the explosion of other unregulated electronic devices in vast qualities destroyed the band not broadcaster to broadcaster interference (station to station). We urge the Commission to return to the pre-1991 rule change standards of 50% RSS exclusion method using co-channel facilities for nighttime allocations studies and coverage contours so that stations may try to overcome the level of man-made interference across all station classes.

We also urge approval of the return to the 1:1 protection ratio for daytime first-adjacent stations and the elimination of the third-adjacent channel protection requirements.

As the notice has stated in paragraph 16, allocation standards concerning the protected contour and interference contours for Class B, C and D stations are still in a state of flux and that greater input from the industry is still required. We have offered our concerns in "*Additional comments regarding other class stations*" on pages 2 and 3 of this document. Particularly how Class C stations will be impacted by contour protection changes and to what advantage is a power increase to overcome additional "move-in" interference when they are already operating at maximum power.

Given the period of time that has passed since this docket was first opened, and the daily mounting distress of the industry as it awaits Commission action on the various "improvement" proposals we urge the Commission to move forward without delay.

Respectfully submitted,



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